

ABSTRACT OF THE DISCLOSURE

A wavelength-division-multiplexing system is disclosed and includes: a semiconductor-amplification section for amplifying each inputted channel with 5 amplification factors corresponding to the compensation signals received therein; a multiplexer for multiplexing a plurality of channels inputted from the semiconductor-amplification section and outputting the multiplexed signals; an optical-detection section for splitting a part of the multiplexed optical signals inputted from the multiplexer, demultiplexing the split optical signals into a plurality of channels, 10 converting each of the demultiplexed channels into corresponding electric signals, and outputting the electric signals; and, a control section calculating the pertinent intensity deviations by comparing each intensity of the electric signals inputted from the optical-detection section with a preset reference intensity and outputting compensation signals for compensating the intensity deviation of each channel to the semiconductor- 15 amplification section.